

CLAIMS.

1.- A method for increasing the perceived resolution and decreasing the pixelisation of an image in applications involving a digital imaging apparatus comprising a lens and an imaging device, such as a display or a sensor, with a relatively low native resolution and comprising an array of pixels, the imaging device being used to sample the image, whereby the method consists of increasing the sampling rate, thereby sampling the image a multiple times, and, for each subsequent sampling, offsetting the apparent relative position between the imaging device and the lens.

2.- The method according to claim 1, wherein the sampling rate is at least doubled.

3.- The method according to claim 1, wherein the apparent relative position between the imaging device and the lens is offset in a horizontal and or a vertical direction.

4.- The method according to claim 1, wherein the apparent relative position between the imaging device and the lens is offset in a diagonal direction.

5.- The method according to claim 1, wherein the apparent relative position between the imaging device and the lens is offset at least over a distance equal to a fraction of the size of a pixel.

6.- The method according to claim 5, wherein the apparent

relative position between the imaging device and the lens is offset over a distance equal to the size of a number of pixels plus a fraction of the size of a pixel.

7.- The method according to claim 1, wherein the apparent relative position between the imaging device and the lens is offset by either offsetting the imaging device or by offsetting the lens, or by offsetting both the imaging device and the lens.

8- The method according to claim 1, wherein the apparent relative position between the imaging device and the lens is offset by tilting a transparent plate situated in the optical trajectory of the image.

9- The method of claim 8, wherein the transparent plate is situated between the imaging device and the lens.

10- The method of claim 8, wherein the transparent plate is tilted stepwisely between two or more angular positions in a synchronized manner with the increased sampling frequency.

11.- An imaging apparatus allowing to increase the perceived resolution and to decrease the pixelisation of an image according to the method of one of the preceding claims, comprising a housing, at least a lens and a digital imaging device, such as a display or a sensor, with a relatively low resolution and comprising an array of pixels for sampling images with a given sampling rate, wherein the imaging apparatus further comprises means for

offsetting the apparent relative position between the imaging device and the lens.

12.- The imaging apparatus according to claim 11, wherein the means for offsetting the apparent relative position between the imaging device and the lens are formed by a transparent plate positioned between the lens and the imaging device, said transparent plate being rotatably fixed on a shaft, and driving means to rotate the plate in an alternating manner between predetermined angular positions.

13.- The imaging apparatus according to claim 12, wherein the driving means to rotate the transparent plate comprise at least one rotating camshaft driven by a motor and a cam follower which is in contact with said camshaft and which is connected to the transparent plate.

14.- The imaging apparatus according to claim 13, wherein the transparent plate is connected to a spring which is attached to the housing of the imaging apparatus.

15.- The imaging apparatus according to claim 13, wherein the rotating speed of the motor is such that tilting the transparent plate between angular position is synchronized with the sampling rate.

16.- The imaging apparatus according to claim 12, wherein the transparent plate is alternately tilted back and forth between two predetermined angular positions parallel to the imaging device or slightly tilted in respect to the

imaging device.

17.- The imaging apparatus according to claim 11, wherein said device is a digital camera.

18.- The imaging apparatus according to claim 11, wherein said device is a digital projecting device.

19.- The imaging apparatus according to claim 11, wherein said device is a digital printing device.